

FORT DELAWARE  
Pea Patch Island  
Delaware City vicinity  
New Castle County  
Delaware

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HAER No. DE-56

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Northeast Region  
U. S. Custom House  
200 Chestnut Street  
Philadelphia, PA 19106

## HISTORIC AMERICAN ENGINEERING RECORD

FORT DELAWARE

HAER No. DE-56

Location: Pea Patch Island, Delaware City vicinity, New Castle County,  
Delaware

USGS 7.5' Topographic Series Delaware City, DE-NJ Quadrangle.  
Universal Transverse Mercator Coordinates: 18.451300.4382340

Date of Construction: 1833

Engineer: Captain Richard Delafield

Present Owner: State of Delaware; Philadelphia District, U.S. Army Corps of  
Engineers

Present Use: Historic Site / State Park

Significance: Fort Delaware served as the primary defense of the Delaware River  
from the second quarter of the 19th century until the start of World  
War II. The Fort played an important role during the Civil War when  
the facility served as the largest prisoner of war camp in the North. A  
constant theme in the fort's history, represented by the sea wall, has  
been the need to exclude the tide from Pea Patch Island and to  
adequately drain the facilities thereon. Unsanitary conditions of the  
prisoner of war camp, in part stemming from poor drainage, gave the  
Fort the reputation of being the Union's counterpart to the infamous  
Confederate prisoner of war camp at Andersonville.

Project Information: The Philadelphia District of the U.S. Army Corps of Engineers  
proposes to undertake a deepening of the Delaware River Main  
Channel and has determined the project will have an accelerating  
effect upon erosion taking place on the southeast corner of Pea Patch  
Island. To arrest this erosion, the Corps will undertake certain  
measures including reconstruction of a breakwater. Prior to this work  
the Corps has agreed to conduct HAER recording of the historic  
breakwater section which will be impacted.

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### Historical Overview of Fort Delaware

Pea Patch Island, the site of Fort Delaware, first appears as a recognizable landform — as an unnamed shoal -- on a navigational chart of the Delaware River prepared by Joshua Fisher in 1756. By 1784 this shoal was being referred to as an island, although it was quite frequently entirely covered by water at high tide. In 1794 the well-known French military engineer, Major Pierre L'Enfant, in the course of devising a system of coastal defenses for the eastern seaboard of the United States, suggested that Pea Patch Island be developed as a major defensive fortification for the Delaware River. However, despite this early recognition of its strategic potential, it was not until 1813, as the United States prepared to repel British naval attacks during the War of 1812, that the first efforts to erect defenses on the island were undertaken. Plans called for the fortifications to have been centered on a simple earthen and timber fort, square in plan with a bastion at each corner. The intended footprint of the first fort can be seen on a plan of Pea Patch Island taken from an 1815 drawing in the National Archives. Captain Thomas Clark of the Army Corps of Engineers was sent with 100 soldiers and 40 laborers to begin construction on the defenses, but due to the ongoing military conflict with Great Britain, military appropriations were stretched considerably and funding for the Pea Patch Island defenses dried up quickly. Clark was, however, able to accomplish several tasks in preparation for the construction of the fort before he was recalled. These included the construction of wharfage to provide for the delivery of construction materials, supplies and man power, the erection of an earthen bank around 70 acres of the island in order to keep the low lying landform from flooding at high tide and the sinking of a chevaux-de-fris within the main channel of the Delaware River (Catts et al. 1983:18-20).

These first abortive efforts were soon followed up by the development of plans for the construction of a much more substantial, pentagonal "star" fort. Overseen by Captain Samuel Babcock, construction began on this new fortification in 1815. Not completed until 1827 due to inadequacies of design and construction, the brownstone structure was accessed by a canal which linked the fort to a wharf on the northeast side of the island. In 1831, Babcock's star fort fell victim to a serious fire and was so severely damaged as to be judged unworthy of repair. The shape of Babcock's star fort and placement of its perimeter defenses and support buildings can be seen on a map developed from an 1834 plan of Pea Patch Island in the National Archives (Catts et al. 1983:20-25).

In 1833, Richard Delafield, then a Captain in the Corps of Engineers, was transferred from Cumberland, Maryland, where he was supervising the construction of a junction point on the National Road to a command which involved the reconstruction of Fort Delaware, as well as supervision and administration of harbor improvements at New Castle, Chester and Marcus Hook and the works at Fort Mifflin. The fort itself was to be rebuilt in much enlarged form and would have been triangular in outline, extending further to the north and west than its

predecessor. Two large bastions were placed along its eastern side facing the main channel of the Delaware River and excavations were made for what was presumably intended as an exceptionally thick curtain wall on the northwest side, probably as an extra defense against inundation by water from upstream. This ambitious enterprise involved considerable strengthening of the defensive perimeter and extensive new ditching and drainage work. Several more buildings, chiefly workshops, storage facilities and living quarters for the fort's support staff, were erected just inside the sea wall along the northeastern and southeastern sides of the island. Unfortunately, Delafield's designs for the new Fort Delaware were never fully implemented as construction was halted in 1838 owing to a dispute between Joseph Hudson and the government over the ownership of the island. Hudson's claim to ownership was finally upheld by the courts in 1848 and the government was required to pay the sum of \$1,005 for the island, but in the meantime, the fort had lain dormant and exposed to deterioration (Catts et al. 1983:27). Captain Delafield later went on to supervise projects for the Atlantic Coast defenses. He eventually became the Superintendent of the Corps of Engineers Academy at West Point and rose to the rank of Major General (Snyder and Guss 1974:66).

In 1848, following resolution of the ownership dispute, the U.S. Army Corps of Engineers directed Brevet Major John Sanders to resume the fortification of Fort Delaware adopting a new, scaled-back design for the main fort structure and re-using as much material as possible that had been left over from Delafield's construction project of a decade earlier. The new fort, however, also made use of freshly quarried stone from Maine, Massachusetts, Maryland and Pennsylvania. This fort formed an irregular pentagon in plan with bastions at its five corners. It occupied the same site as the earlier star fort, but its five walls used slightly different alignments. Its 32-foot high walls were constructed of solid granite blocks and bricks, varying in thickness from seven feet to 30 feet and were surrounded by a 30-foot-wide moat, crossed by a drawbridge on the Delaware side leading to the fort's sally port, or principal entrance. Containing almost four acres, the fort was at this time the largest masonry fortification in the United States (Catts et al. 1983:29).

By the mid-1850s, several additional buildings -- mostly workshops and living quarters -- were ranged along the interior face of the sea wall in the southeastern and northern sectors of the island. The fort was essentially complete by 1859, its rehabilitation having cost in excess of \$1,305,000. As a result of all this construction activity, the area surrounding the main fort, filled with shops, warehousing, sheds, houses, shanties and other structures, evolved into a well-established civilian settlement. Services such as a bakery, a laundry and even a school were included within this community (Catts et al. 1983:28-32).

Fort Delaware's greatest period of activity occurred during the Civil War. The fort was occupied by a single company of regular artillery in February 1861. The Commonwealth Artillery of Pennsylvania was the first volunteer unit to move in after the War began. Following the battle of

Kernstown in 1862, 250 troops of Stonewall Jackson's army became the island's first sizeable group of Confederate prisoners of war. Wooden barracks were erected in 1862 to house 2,000 prisoners. Most of the Confederates captured at Gettysburg were imprisoned at Fort Delaware after the battle. Initially the prisoners were housed in brick barracks located within the main fort. Fort Delaware had not been constructed for such use, so the barracks space was crowded. As the prisoner population grew the prison quarters were relocated to the northwestern half of the island.

Prisoners were housed in crudely constructed, fence-enclosed barracks in an eight-acre compound. Each camp was arranged into ten rows of barracks. Each barrack was subdivided into chambers, which were known as "divisions." A division was 19 by 60 feet with a narrow passage separating bunks in three tiers to either side, and housed from 400 to 900 men. A Confederate prisoner of war described the camp thus:

"The pens were formed by enclosing a parallelogram of some eight acres by a continuous line of rude one-story pine barracks, running round the four sides. The enclosure, or courtyard, was then divided into two yards by a double line of high plank fence, with a parapet on the top, for sentries to walk and overlook the prisoners in each square.

An alley ten feet broad separated the two fences, preventing any intercourse between the two pens, and giving access to gates opening into each. Officers occupied the smaller pen nearest the fort; privates the other, which, though larger, was many times more crowded.

The row of barracks were under a continuous roof, but were divided into rooms called "Divisions" numbered from no. one to forty. The buildings were really shells, constructed of long planks standing on end, in line, like a double fence, or covered bridge, running round three sides of a square. The floor was as rough as a stable; the roof leaky as a sieve; the weatherboarding so open that you could thrust your hand between most of the planks, and great drifts of snow accumulated upon our beds every night in winter" (Catts et al. 1983:36).

Hospital facilities (both a general hospital and a contagious hospital) and other structures, including a kitchen and bakery, sutler's shops, latrines, surgeon's quarters, garrison barracks, an "oyster house," beer saloon, tailor shop, officer's gymnasium, commissary and store house and watch houses, were also constructed, sufficient eventually to support a prison population of up to 13,000 with their attendant guards and service staff. Other more temporary structures were erected by the prisoners themselves to suit their needs. These included barber shops, a ring maker's tent and arbors for shade. The prisoners also erected a chapel which was used by the Federal officers and their families. During this period, virtually the entire island was improved

in some form or other to accommodate the vastly increased population. Most of the new construction took place in the northwest half of the island, but the older developed southeast end continued in use and saw the erection of some additional buildings (Catts et al 1983:34, 37- 41). The Civil War period expansion of the facility is documented in a plan taken from an 1865 map of Pea Patch Island in the National Archives, but is perhaps better expressed by an 1864 drawing executed by Max Neugas, an engineer stationed on the island at the time. Neugas's depiction vividly conveys the atmosphere of Pea Patch Island during its prison camp days.

After the Civil War, the resident population of Pea Patch Island declined dramatically and the focus shifted from housing prisoners to improving the fort's defensive systems. In the early 1870s, the barbette platforms located in the bastions of the main fort were modified to accommodate 15-inch Rodman guns. It was also at this time that concrete and earth-covered service magazines were added to the terre plain. In 1894 a massive two-story concrete emplacement for three 12-inch guns on disappearing carriages was constructed covering more than half of the parade ground. Outside the main fort two rapid-fire gun batteries and a torpedo casemate were constructed, but the majority of the earlier civilian and prison-related structures were either taken down or fell into disrepair. By the final decade of the 19th century, no more than a dozen or so frame buildings were surviving from the earlier period. In 1890, a plan was drawn up for the upgrading of the fort's armament. This scheme centered upon the installation of three 12-inch guns within a two-story concrete emplacement. This primary armament was to be supplemented by two batteries of rapid-fire guns to be emplaced outside of the fort. Work on the implementation of this plan began in 1894 when Major Charles W. Raymond was assigned to begin construction. Construction was completed on the first component of the plan, a reinforced concrete, earth-covered torpedo casemate on the north end of the island by the end of that year. Work began on the construction of the main battery in 1897. A temporary emplacement of two batteries of 4.75-inch rapid-fire guns on the fort's terre plain was made in 1898 in time for the Spanish-American War. These guns were replaced by permanent installation of two batteries of 3-inch rapid-fire guns in 1899. By 1900, all of the improvements had been completed (Catts et al. 1983: 46-49).

The last major alterations to the island occurred in 1904-08 when between 3 and 12 feet of dredge spoil fill were spread over the surface of the island, raising its overall elevation considerably. In preparation for this work nearly all of the other remaining buildings on the island were raised. With the exception of two buildings saved as quarters for white and black laborers, only the fort, the new gun emplacements, the torpedo casemate and a coal bin were allowed to remain. A map derived from a plan of 1905 made in preparation for the deposition of dredge spoils shows the fort, its sea wall, moat, sluiceway and the torpedo casemate on the northern point of the island. New entrances to the batteries needed to be constructed and the height of the torpedo storehouse was also raised (Catts et al. 1983:52).

From 1908 to 1945, Fort Delaware functioned in a secondary defensive role to the nearby pair of forts known as Dupont and Mott, which were located respectively on the Delaware and New Jersey sides of the river. Throughout this period, for the most part, the fort was occupied only by a small caretaker garrison. For a brief period during the First World War (February 1917 to December 1918) Fort Delaware was manned by the 3rd Company Coast Artillery. With the beginning of the Second World War, new schemes for the defense of the Delaware River were developed. Rather than focusing at the point where the river expanded into the bay as the Fort Delaware-Fort Mott-Fort Dupont line of defense had, these plans called for the fortification of the mouth of the bay. The Fort Delaware garrison was increased in size until these new defenses were completed. Once finished the large gun emplacements and sighting towers at Cape May Point, New Jersey, and at Fort Miles, Cape Henlopen, Delaware, rendered Fort Delaware totally obsolete. On October 1, 1944 the War Department declared the site surplus and the island reverted back to the State of Delaware, with the Philadelphia District of the U.S. Army Corps of Engineers retaining 19 acres for river and harbor maintenance projects. In 1951 the island was assigned to the State Park Commission and since that time, this agency, with the help of the Fort Delaware Society, has done much to arrest the deterioration of the facility and to interpret the site for visitors.

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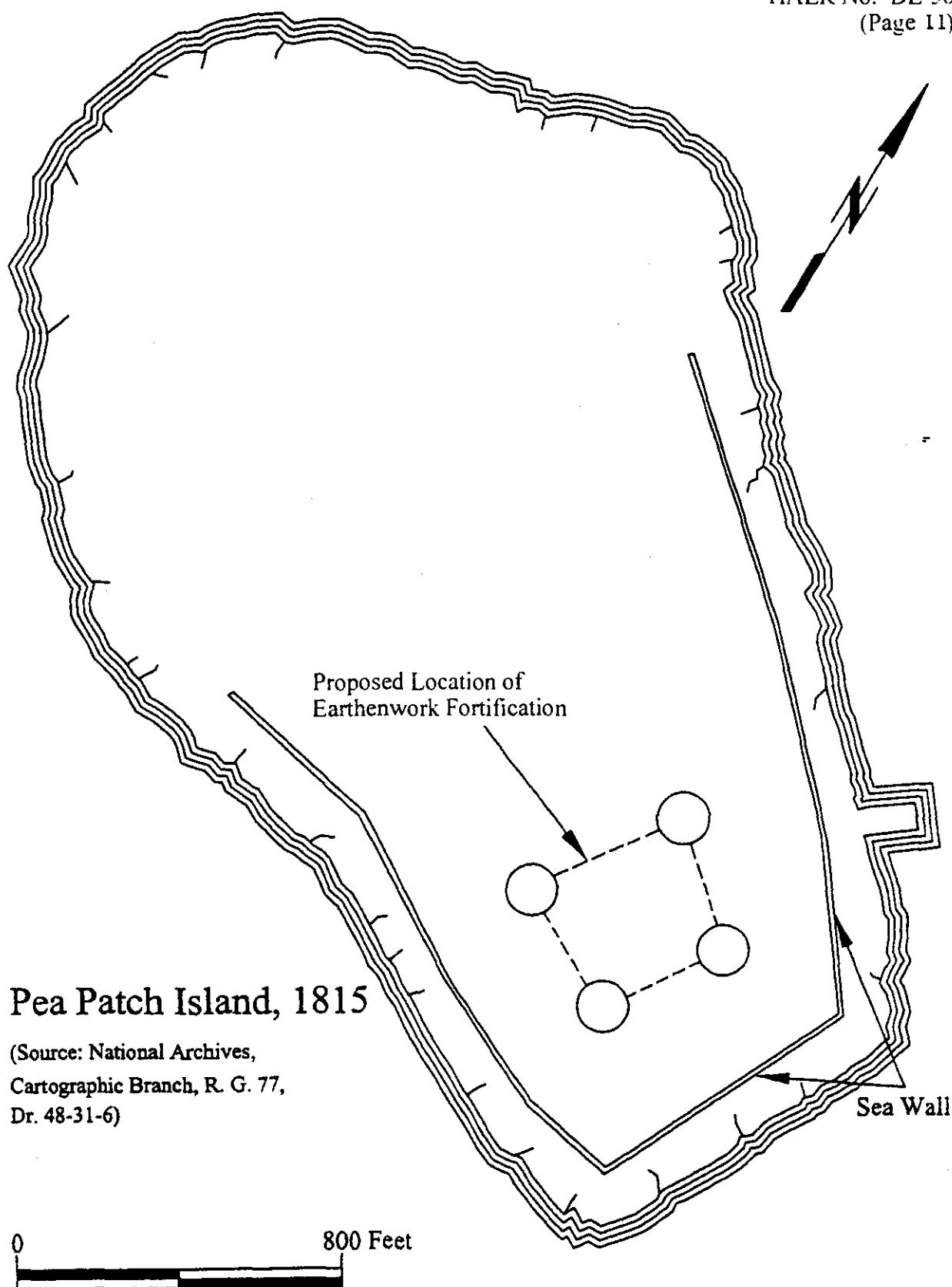
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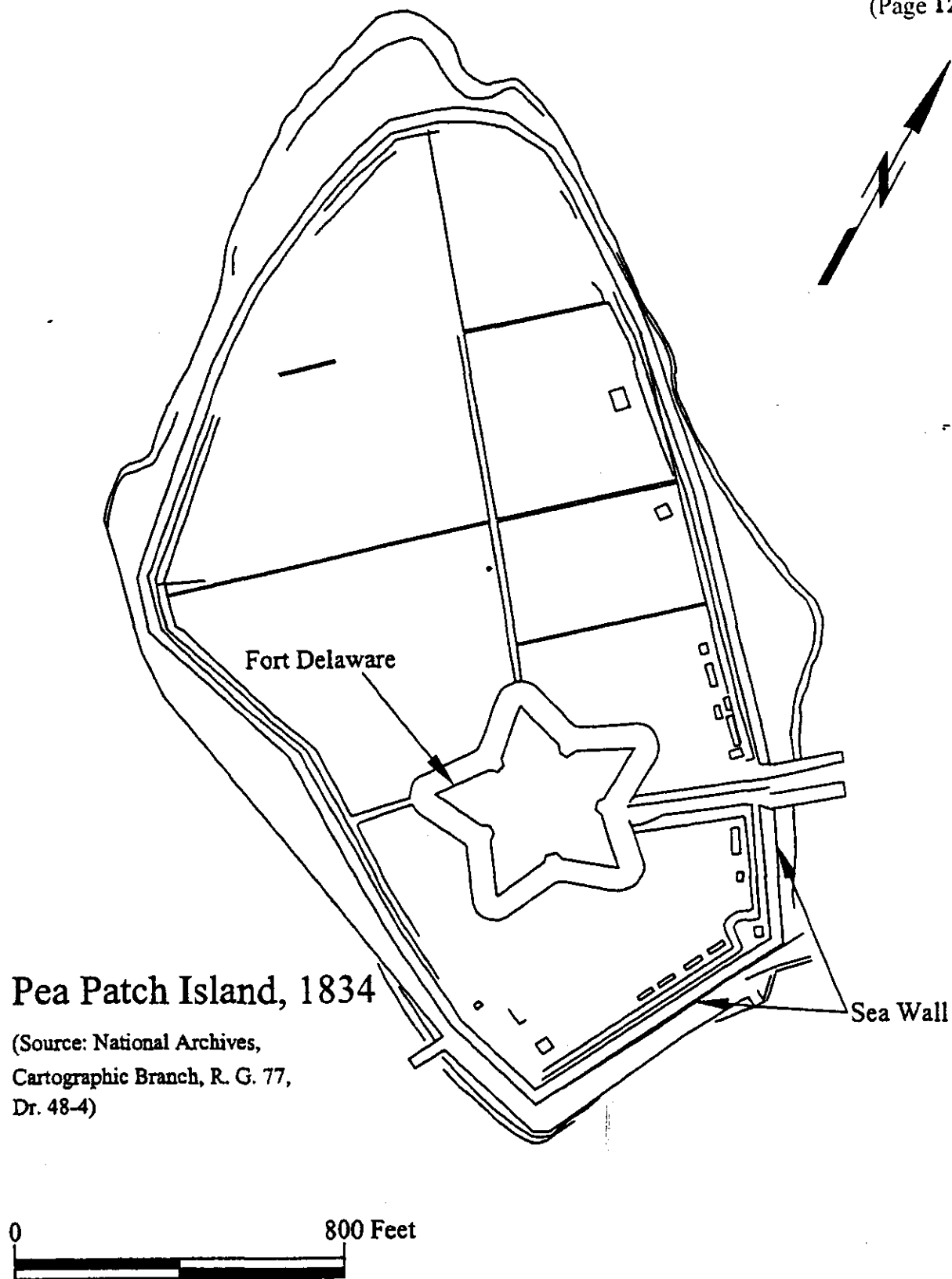
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## Pea Patch Island, 1834

(Source: National Archives,  
Cartographic Branch, R. G. 77,  
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